

# Construction Industry Coalition on Water Quality

## Alternative Approaches to the Proposed Planning and Land Development Program in the Draft Ventura County MS4 Permit

By

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# Introduction

- Municipal Action Levels
- New Development and Redevelopment
  - Spatial Scales of Development Projects
  - Low Impact Development Implementation
  - Hydromodification Control
- Construction-phase Requirements
  - Wet Season Grading Ban
  - Consistency with CGP and BMPs

# Shared Objectives

- Protection of Water Quality and Beneficial Uses
- Implementability
- Limit need for interpretation
- Consistency of approach



# Municipal Action Levels

Issues with this provision include:

- Whether the MALs, based on national dataset, are appropriate benchmarks for implementation of MEP in Ventura County.
- Whether using a central tendency (median) with limited variability of observed urban runoff quality ( $COV = 2$ ) is appropriate for setting MALs.
- Whether a permit violation is the appropriate remedy for two exceedences of an MAL (in-stream).

<b>Pollutant</b>	<b>Proposed MAL</b>	<b>Southwestern US Data</b>
		<b>90<sup>th</sup> Percentile</b>
TSS (mg/l)	106.2	513
COD (mg/l)	58.3	361
Cadmium Total (ug/l)	2.0	3
Cadmium Dissolved (ug/l)	0.55	0.8
Chromium Total (ug/l)	10.5	34
Chromium Dissolved (ug/l)	1.5	3.8
Copper Total (ug/l)	32.0	120
Copper Dissolved (ug/l)	12.8	33
Lead Total (ug/l)	30.6	225
Lead Dissolved (ug/l)	6.0	22
Nickel Total (ug/l)	9.6	54
Zinc Total (ug/l)	232	1,120
Zinc Dissolved (ug/l)	104	1,300

# Low Impact Development and Imperviousness



- Consider project scale
- Consider percent imperviousness at all scales
- Consider the special needs of infill and redevelopment projects

# Disconnecting Impervious Surfaces

- Typical urban development reduces evapotranspiration and infiltration, creating large increases in runoff volume
- Need to recreate the “sponge” in vegetation and non-compacted soils
- Disconnection of impervious surfaces mimics the pre-development evapotranspiration rate by managing the “sponge” in landscaped areas or vegetated BMPs
- This sponge can exist anywhere on the landscape - the receiving water can't tell if it is “on-site” or “regional”

## Bioretention/Swale (One Street)



## Vegetated Swale (Small Neighborhood)



# Wet Pond (Sub-Regional)

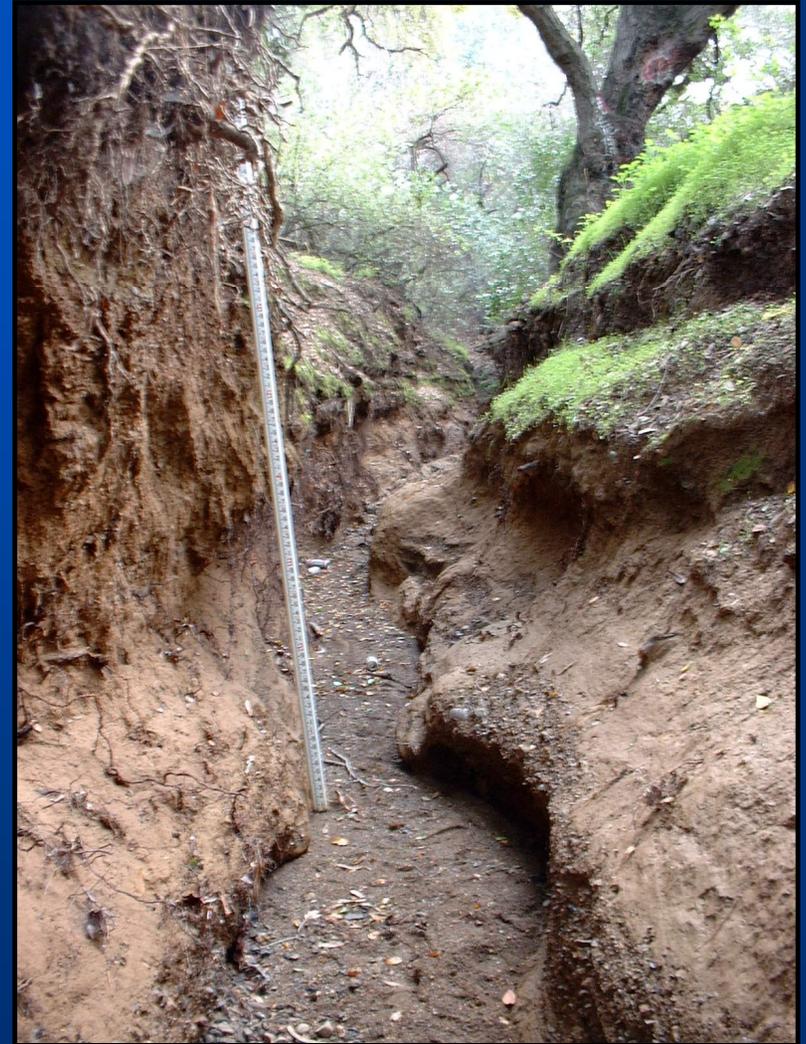


## Infiltration Basin (Regional System)



# Hydromodification Impacts

- Increase in runoff peak flow, volume, and flow durations
- Intensifies sediment transport and erosion processes



# Hydromod Issue #1

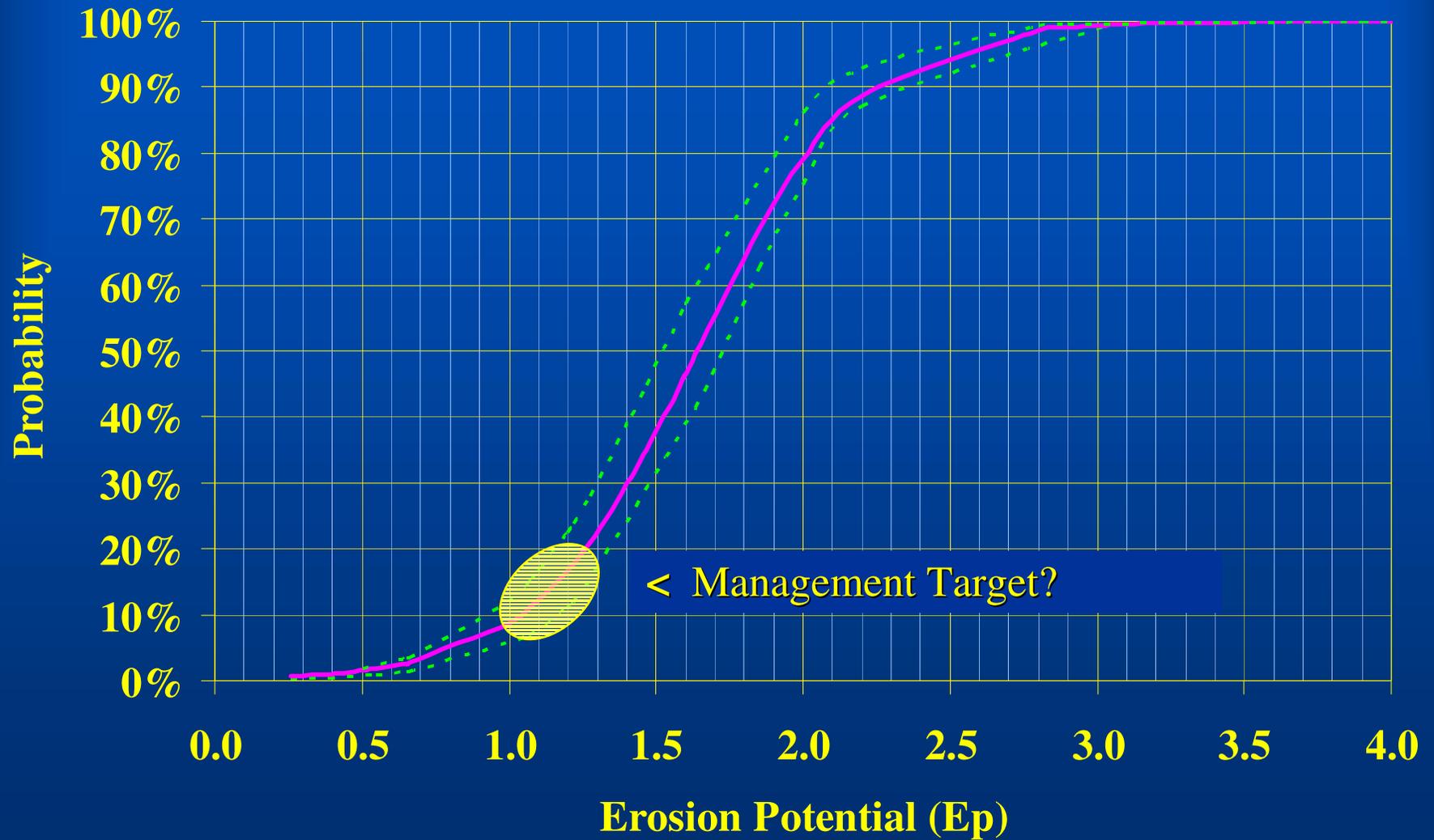
- Requirement
  - All projects shall maintain pre-development stormwater runoff flow rates and durations
- Issue
  - Does not consider stream channel susceptibility



# Hydromod Issue #2

- Requirement
  - All projects in natural drainage systems must meet  $E_p = 1$
- Issues
  - $E_p = 1$  does not account for effect of changes in sediment supply
  - Lacks practical tolerance value using risk-based approach

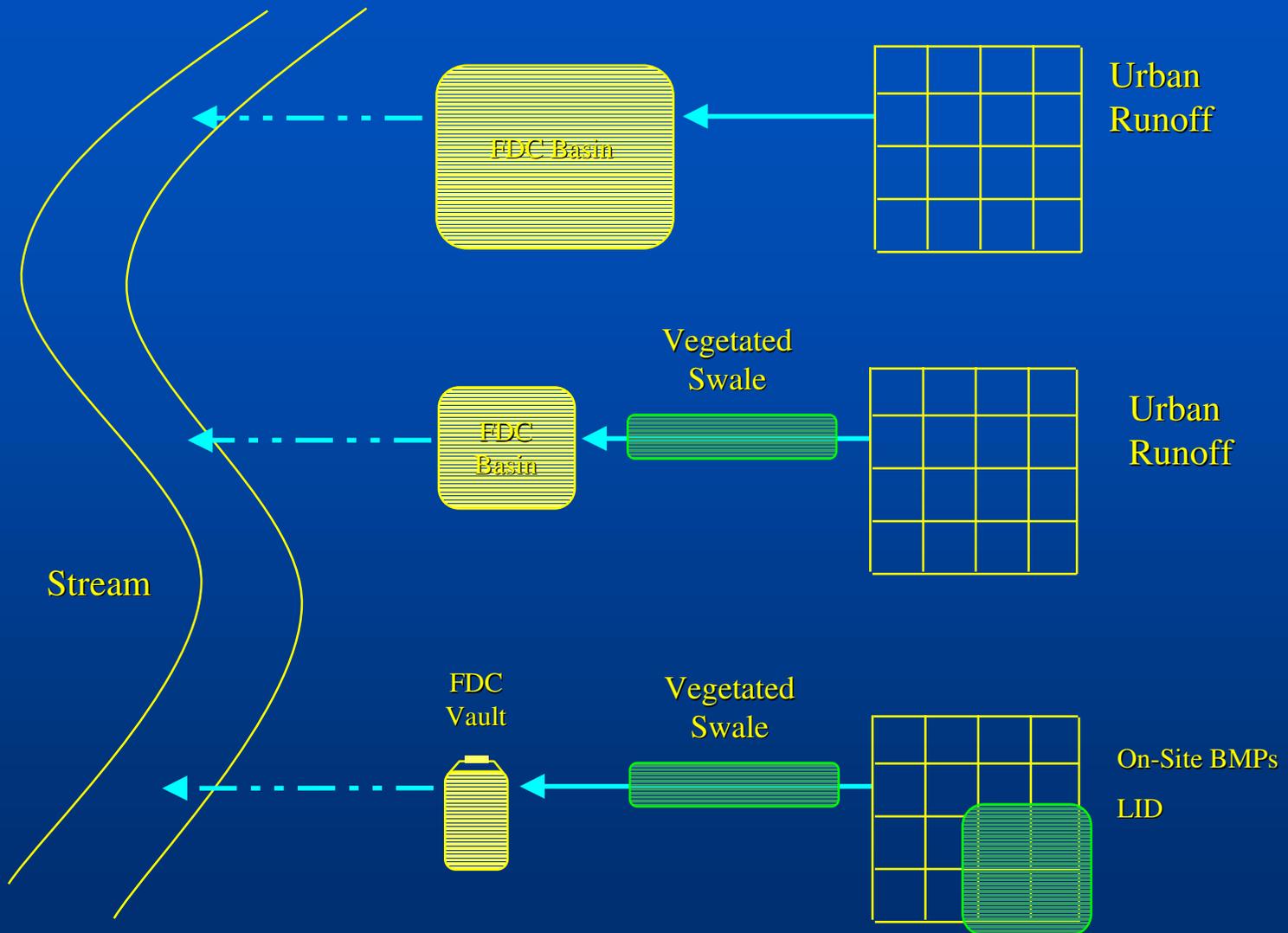
# Risk of Channel Instability



# Hydromod Issue #3

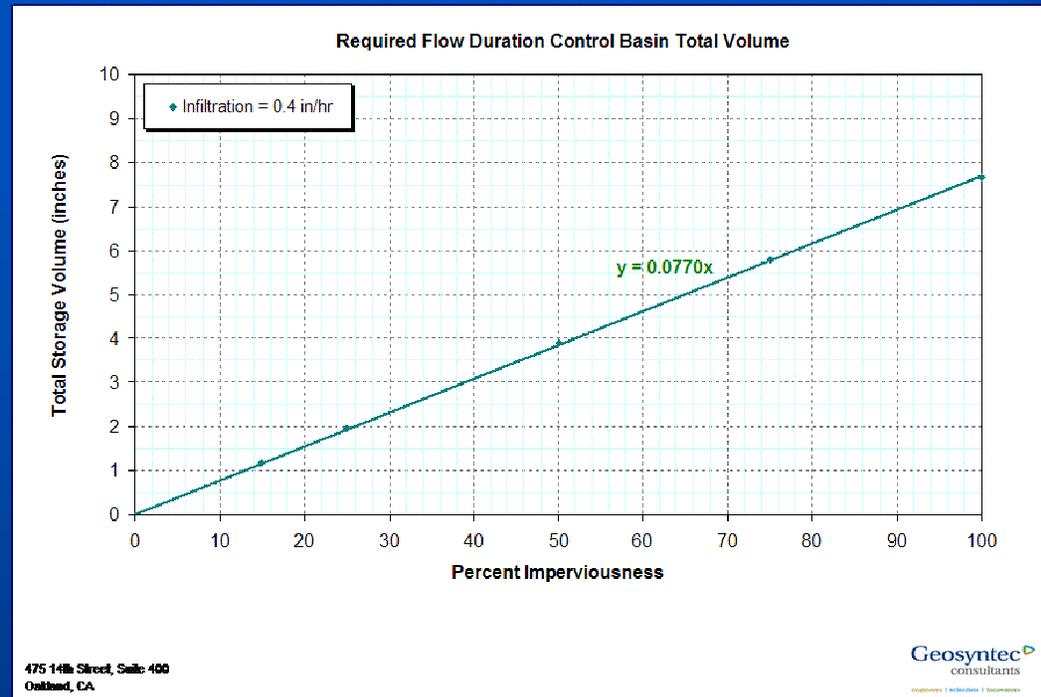
- Requirement
  - All projects shall maintain Effective Impervious Area <5%
- Issue
  - Mandates one of many tools to achieve numeric Ep standard and is redundant with numeric Ep standard

# Hydromodification Control Options



# Hydromod Issue #4

- Requirement for Interim hydrograph matching standard not protective of stream channels



- Propose replacement with nomograph tool based on Ep method

# Construction Grading Restrictions

- Wet Season Grading Ban
  - There are between 23 to 28 days within the 6½ month (approximately 195 day) wet season on which rain occurs
  - Require a two-tiered approach to BMP implementation, with more stringent BMPs required in the wet season for sites with a high erosion potential
- Consistency with Construction General Permit and BMPs

# Summary Points

- **Revise approach to setting Action Levels.....actions, not violations**
- **Consider project scales in implementing LID and hydromod approaches**
- **Consider watershed and waterbody characteristics in setting hydromod standards....consider real risks...**
- **Construction requirements consistent with General Permit....no ban, please**

